THE ASTROPHYSICAL JOURNAL

INDEX TO VOLUME 301, PARTS 1 AND 2

1986 FEBRUARY 1 AND FEBRUARY 15

AARONSON, MARC. Discovery of Cepheids in M101. *Kem H. Cook, Marc Aaronson, and Garth Illingworth*. **301**, L45, 27-B6 (1986)

ACTON, L. W. Electron Density Diagnostics in the 10–100 Å Interval for a Solar Flare. *W. A. Brown, M. E. Bruner, L. W. Acton, and H. E. Mason*. **301**, 981, 26-D10 (1986)

AHMAD, I. A. *IUE* Observations of Accretion Columns in Two Zeta Aurigae–Type Systems. *I. A. Ahmad*. **301**, 275, 16-G13 (1986)

AKHMEDOW, SH. B. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)

ALBINSON, J. S. Aperture Synthesis Observations of the 21 Centimeter Zeeman Effect toward Cassiopeia A. *U. J. Schwarz, T. H. Troland, J. S. Albinson, J. D. Bregman, W. M. Goss, and Carl Heiles*. **301**, 320, 17-D4 (1986)

ALLEN, A. J. Morphology and Asymmetry of Active Galaxies from Cavity Stability. *A. J. Allen*. **301**, 44, 14-D10 (1986)

ALLER, H. D. *see* BREGMAN, JOEL N., *et al.*

ALLER, M. F. *see* BREGMAN, JOEL N., *et al.*

ALLER, L. H. Observations of the Bowen Fluorescent Mechanism in Planetary Nebulae. *Lauren Likkel and L. H. Aller*. **301**, 825, 24-F2 (1986)

ALLER, LAWRENCE H. Origin of Planetary Nebulae: Morphology, Carbon-to-Oxygen Abundance Ratios, and Central Star Multiplicity. *B. Zuckerman and Lawrence H. Aller*. **301**, 772, 24-A10 (1986)

ANGEL, J. R. P. 15 Meter Multiple Mirror Telescope Design Study. *J. R. P. Angel and N. J. Woolf*. **301**, 478, 19-A13 (1986)

ANTIOCHOS, S. K. The Structure of the Static Corona and Transition Region. *S. K. Antiochos and G. Noci*. **301**, 440, 18-F1 (1986)

ANTONUCCI, E. On Magnetic Field Stochasticity and Nonthermal Line Broadening in Solar Flares. *E. Antonucci, R. Rosner, and K. Tsinganos*. **301**, 975, 26-D4 (1986)

APPLEGATE, JAMES H. Dynamical Effects of Stellar Evolution in Globular Clusters. *James H. Applegate*. **301**, 132, 15-D3 (1986)

ARAKALIAN, MARAT A. A Proposed Method for the Determination of the Bivariate Luminosity Function Utilizing an Incomplete Sample with an Application to Seyfert Galaxies. *Marat A. Arakalian*. **301**, 92, 15-A5 (1986)

ATTEIA, J.-L. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

BALONEK, T. J. *see* BREGMAN, JOEL N., *et al.*

BARAT, C. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

BARVAINIS, R. E. *see* BREGMAN, JOEL N., *et al.*

BAUM, WILLIAM A. Magnesium Gradients in Elliptical Galaxies. I. Method and Initial Results. *William A. Baum, Bjarne Thomsen, and Brian L. Morgan*. **301**, 83, 14-G10 (1986)

BAYIN, SELÇUK Ş. Symmetry Changes in Frimdmann Cosmologies. *Selçuk Ş. Bayin*. **301**, 517, 21-D1 (1986)

BEARDSLEY, I. S. Variable Polarization and Activity in Arcturus. *J. C. Kemp, G. D. Henson, D. J. Kraus, I. S. Beardsley, L. C. Carroll, and D. K. Duncan*. **301**, L35, 20-D7 (1986)

BECHTOLD, JILL. On the Abundance of Metals and the Ionization State in Absorbing Clouds toward QSOs. *Frederic H. Chaffee, Jr., Craig B. Foltz, Jill Bechtold, and Ray J. Weymann*. **301**, 116, 15-C1 (1986)

BENSON, JOHN M. Interstellar Scattering of Compact Radio Sources near Supernova Remnants. *Steven R. Spangler, Robert L. Mutel, John M. Benson, and James M. Cordes*. **301**, 312, 17-C8 (1986)

BEREZINSKY, V. S. High-Energy Neutrinos from Cygnus X-3. *V. S. Berezinsky, C. Castagnoli, and P. Galeotti*. **301**, 235, 16-E1 (1986)

BLANDFORD, ROGER. Flicker of Extragalactic Radio Sources and Refractive Interstellar Scintillation. *Roger Blandford, Ramesh Narayan, and Roger W. Romani*. **301**, L53, 27-C3 (1986)

BLITZ, LEO. High-Latitude Molecular Clouds: Completeness of the Local Sample and Implications for Molecular Surveys. *Loris Magnani, Elizabeth A. Lada, and Leo Blitz*. **301**, 395, 18-B9 (1986)

BLUMENTHAL, GEORGE R. Contraction of Dark Matter Galactic Halos Due to Baryonic Infall. *George R. Blumenthal, S. M. Faber, Ricardo Flores, and Joel R. Primack*. **301**, 27, 14-C6 (1986)

BOGOD, V. M. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)

BÖHM-VITENSE, ERIKA. A Simple Explanation for the Linksy-Haisch Boundary Line for Transition Layers. *Erika Böhm-Vitense*. **301**, 297, 17-B7 (1986)

BOROVIK, V. N. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)

BOTHUN, GREGORY D. Blue Disk Galaxies in the Coma Clsuter: Analogs to $z = 0.5$ Cluster Members? *Gregory D. Bothun and Alan Dressler*. **301**, 57, 14-E9 (1986)

BOUGHN, STEPHEN P. The Smoothness of the 2.2 Micron Background: Constraints on Models of Primeval Galaxies. *Stephen P. Boughn, Peter R. Saulson, and Juan M. Uson*. **301**, 17, 14-B10 (1986)

BRANDT, H. V. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)

BRAY, R. J. High-Resolution Photography of the Soslar Chromosphere. XXIII. Direct Measuruement of the Optical Thickness of Hα Solar Loops. *R. J. Bray and R. E. Loughhead*. **301**, 989, 26-E4 (1986)

BREGMAN, J. D. Aperture Synthesis Observations of the 21 Centimeter Zeeman Effect toward Cassiopeia A. *U. J. Schwarz, T. H. Troland, J. S. Albinson, J. D. Bregman, W. M. Goss, and Carl Heiles*. **301**, 320, 17-D4 (1986)

BREGMAN, JESSE D. *see* BREGMAN, JOEL N., *et al.*

BREGMAN, JOEL N., *et al.* Multifrequency Observations of the Superluminal Quasar 3C 345. *Joel N. Bregman, A. E. Glassgold, P. J. Huggins, G. Neugebauer, B. T. Soifer, K. Matthews, J. Elias, J. Webb, J. T. Pollock, A. J. Pica, R. J. Leacock, A. G. Smith, H. D. Aller, M. F. Aller, P. E. Hodge, W. A. Dent, T. J. Balonek, R. E. Barvainis, T. P. L. Roellig, W. Z. Wiśniewski, G. H. Rieke, M. J. Lebofsky, B. J. Wills, D. Wills, W. H.-M. Ku, Jesse D. Bregman, F. C. Witeborn, D. F. Lester, C. D. Impey, and J. A. Hackwell*. **301**, 708, 23-C13 (1986)

BREGMAN, JOEL N. Variablility of Lyman-Alpha and the Ultraviolet Continuum of 3C 446. *Joel N. Bregman, A. E. Glassgold, P. J. Huggins, and A. L. Kinney*. **301**, 698, 23-C3 (1986)

BROSIUS, J. W. Models of Transition Regions in Hybrid Stars. *J. W. Brosius and D. J. Mullan*. **301**, 650, 22-F11 (1986)

BROWN, W. A. Electron Density Diagnostics in the 10–100 Å Interval for a Solar Flare. *W. A. Brown, M. E. Bruner, L. W. Acton, and H. E. Mason*. **301**, 981, 26-D10 (1986)

BRUNER, M. E. Electron Density Diagnostics in the 10–100 Å Interval for a Solar Flare. *W. A. Brown, M. E. Bruner, L. W. Acton, and H. E. Mason*. **301**, 981, 26-D10 (1986)

BUCKLEY, D. A. H. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)

BURSTEIN, DAVID. The Inclination Dependence of Far-Infrared Emission from Sc Galaxies. *David Burstein and Marcia J. Lebofsky*. **301**, 683, 23-B2 (1986)

CANE, H. V. Two Classes of Solar Energetic Particle Events Associated with Impulsive and Long-Duration Soft X-Ray Flares. *H. V. Cane, R. E. McGuire, and T. T. von Rosenvinge*. **301**, 448, 18-F9 (1986)

CANIZARES, CLAUDE R. High-Resolution X-Ray Spectroscopy of the Crab Nebula and the Oxygen Abundance of the Interstellar Medium. *Mark L. Schattenburg and Claude R. Canizares*. **301**, 759, 23-G11 (1986)

CANNIZZO, J. K. Dwarf Nova Burst Asymmetry and the Physics of Accretion Disks. *J. K. Cannizzo, J. C. Wheeler, and R. S. Polidan*. **301**, 634, 22-E8 (1986)

CANTÓ, J. The Double Radio Source Associated with L1551 IRS 5: Binary System or Ionized Circumstellar Torus? *L. F. Rodriguez, J. Cantó, J. M. Torrelles, and P. T. P. Ho*. **301**, L25, 20-C10 (1986)

CARROLL, L. C. Variable Polarization and Activity in Arcturus. *J. C. Kemp, G. D. Henson, D. J. Kraus, I. S. Beardsley, L. C. Carroll, and D. K. Duncan*. **301**, L35, 20-D7 (1986)

CASTAGNOLI, C. High-Energy Neutrinos from Cygnus X-3. *V. S. Berezinsky, C. Castagnoli, and P. Galeotti*. **301**, 235, 16-E1 (1986)

CASTELAZ, MICHAEL W. GSS 30: An Infrared Reflection Nebula in the Ophiuchus Dark Cloud: Erratum. *Michael W. Castelaz, John A. Hackwell, Gary L. Grasdalen, Robert D. Gehrz, and Craig Gullixson*. **301**, 502, 19-C9 (1986) (Orig. paper in **290**, 261, 26-A1)

CHAFFEE, FREDERIC H., JR. On the Abundance of Metals and the Ionization State in Absorbing Clouds toward QSOs. *Frederic H. Chaffee, Jr., Craig B. Foltz, Jill Bechtold, and Ray J. Weymann*. **301**, 116, 15-C1 (1986)

CHPP, E. L. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)

CLEMENT, MAURICE J. Normal Modes of Oscillation for Rotating Stars. III. Variational Calculations with an Improved Set of Basis Vectors. *Maurice J. Clement*. **301**, 185, 16-A5 (1986)

CLINE, T. L. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)

Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

COHEN, R. S. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)

The Columbia CO Survey of Molecular Clouds in the First Galactic Quadrant (Abstract of Paper in 1986 March Suppl.). *R. S. Cohen, T. M. Dame, and P. Thaddeus*. **301**, 1019, 26-G9 (1986)

COOK, KEM H. Discovery of Cepheids in M101. *Kem H. Cook, Marc Aaronson, and Garth Illingworth*. **301**, L45, 27-B6 (1986)

CORDES, JAMES M. Interstellar Scattering of Compact Radio Sources near Supernova Remnants. *Steven R. Spangler, Robert L. Mutel, John M. Benson, and James M. Cordes*. **301**, 312, 17-C8 (1986)

CRANE, PHILIPPE. How Relaxed Is the Distribution of Galaxies? *Philippe Crane and William C. Saslaw*. **301**, 1, 14-A8 (1986)

CULHANE, J. L. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)

DADHICH, N. Revival of the Penrose Process for Astrophysical Applications: erratum. *S. M Wagh, S. V. Dhurandhar, and N. Dadhich*. **301**, 1018, 26-G8 (1986) (Orig. paper in **290**, 12, 23-B3)

DAME, T. M. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)

The Columbia CO Survey of Molecular Clouds in the First Galactic Quadrant (Abstract of Paper in 1986 March Suppl.). *R. S. Cohen, T. M. Dame, and P. Thaddeus*. **301**, 1019, 26-G9 (1986)

DEMARQUE, PIERRE. The Stellar Seismology of ϵ Eridani. *D. B. Guenther and Pierre Demarque*. **301**, 207, 16-C1 (1986)

DENNIS, B. R. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)

DENT, W. A. *see* BREGMAN, JOEL N., *et al.*

DERMER, CHARLES D. Directionality of Bremsstrahlung from Relativistic Electrons in Solar Flares. *Charles D. Dermer and Reuwen Ramaty*. **301**, 962, 26-C5 (1986)

DE ROBERTIS, M. M. NGC 1320: A Feeble, High-Ionization Seyfert 2 Galaxy. *M. M. De Robertis and D. E. Osterbrock*. **301**, 98, 15-A11 (1986)

An Analysis of the Narrow Line Profiles in Syefert 2 Galaxies. *M. M. De Robertis and D. E. Osterbrock*. **301**, 727, 23-E4 (1986)

DESAI, U. D. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)

Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

DHURANDHAR, S. V. Revival of the Penrose Process for Astrophysical Applications: erratum. *S. M Wagh, S. V. Dhurandhar, and N. Dadhich*. **301**, 1018, 26-G8 (1986) (Orig. paper in **290**, 12, 23-B3)

DIKIJ, V. N. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)

DOWNES, RONALD A. Discovery of a New Short-Period, Eclipsing Cataclysmic Variable. *Ronald A. Downes, Mario Mateo, Paula Szkody, David C. Jenner, and Bruce Margon*. **301**, 240, 16-E9 (1986)

DRESSLER, ALAN. The Morphological Types and Orbits of H I–Deficient Spirals in Clusters of Galaxies. *Alan Dressler*. **301**, 35, 14-D1 (1986)

Blue Disk Galaxies in the Coma Clsuter: Analogs to $z = 0.5$ Cluster Members? *Gregory D. Bothun and Alan Dressler*. **301**, 57, 14-E9 (1986)

DUNCAN, D. K. Variable Polarization and Activity in Arcturus. *J. C. Kemp, G. D. Henson, D. J. Kraus, I. S. Beardsley, L. C. Carroll, and D. K. Duncan*. **301**, L35, 20-D7 (1986)

DURIC, NEBOJSA. A Theoretical Interpretation of the Σ-D Relation for Supernova Remnants. *Nebojsa Duric and E. R. Seaquist*. **301**, 308, 17-C4 (1986)

DWEK, E. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)

ELIAS, J. *see* BREGMAN, JOEL N., *et al.*

ERICKSON, E. F. Detection of Si II (34.8 Micron) Emission in Orion-KL: A Measurement of the Silicon Abundance in Dense Interstellar Gas. *M. R. Haas, D. J. Hollenbach, and E. F. Erickson*. **301**, L57, 27-C7 (1986)

EVANS, NEAL J., II. Far-Infrared Photometry of Low-Mass Pre–Main-Sequence Stars with Broad CO Wings. *Neal J. Evans II, Russell M. Levreault, and Paul M. Harvey*. **301**, 894, 25-D7 (1986)

EVANS, W. D. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

FABER, S. M. Contraction of Dark Matter Galactic Halos Due to Baryonic Infall. *George R. Blumenthal, S. M. Faber, Ricardo Flores, and Joel R. Primack*. **301**, 27, 14-C6 (1986)

FENIMORE, E. E. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

FERNIE, J. D. HR 7671: Another UU Herculis Star? *J. D. Fernie*. **301**, 302, 17-B12 (1986)

FLORES, RICARDO. Contraction of Dark Matter Galactic Halos Due to Baryonic Infall. *George R. Blumenthal, S. M. Faber, Ricardo Flores, and Joel R. Primack*. **301**, 27, 14-C6 (1986)

FOLTZ, CRAIG B. On the Abundance of Metals and the Ionization State in Absorbing Clouds toward QSOs. *Frederic H. Chaffee, Jr., Craig B. Foltz, Jill Bechtold, and Ray J. Weymann*. **301**, 116, 15-C1 (1986)

FORD, V. L. The Structure of the Small Magellanic Cloud. *D. S. Mathewson, V. L. Ford, and N. Visvanathan*. **301**, 664, 22-G11 (1986)

FORD, W. KENT, JR. UGC 12591: The Most Rapidly Rotating Disk Galaxy. *Riccardo Giovanelli, Martha P. Haynes, Vera C. Rubin, and W. Kent Ford, Jr.* **301**, L7, 20-B4 (1986)

FORREST, W. J. Sagittarius A^{STAR} and the Positions of Infrared Sources in

the Galactic Center. *W. J. Forrest, J. L. Pipher, and W. A. Stein*. **301**, L49, 27-B11 (1986)

FOWLER, W. A. A New Estimate of the ^{19}Ne(p, γ)^{20}Na and ^{15}O(α, γ)^{19}Ne Reaction Rates at Stellar Energies. *K. Langanke, M. Wiescher, W. A. Fowler, and J. Görres*. **301**, 629, 22-E3 (1986)

FRANCESCHINI, ALBERTO. On the Relationship between Optically Selected and X-Ray–selected Active Galactic Nuclei. *Alberto Franceschini, Isabella M. Gioia, and Tommaso Maccacaro*. **301**, 124, 15-C9 (1986)

GALEOTTI, P. High-Energy Neutrinos from Cygnus X-3. *V. S. Berezinsky, C. Castagnoli, and P. Galeotti*. **301**, 235, 16-E1 (1986)

GARILLI, BIANCA. On the X-Ray and Ultraviolet Spectrum of the High-Redshift Quasar 3C 446. *Bianca Garilli and Gianpiero Tagliaferri*. **301**, 703, 23-C8 (1986)

GEHRZ, ROBERT D. GSS 30: An Infrared Reflection Nebula in the Ophiuchus Dark Cloud: Erratum. *Michael W. Castelaz, John A. Hackwell, Gary L. Grasdalen, Robert D. Gehrz, and Craig Gullixson*. **301**, 502, 19-C9 (1986) (Orig. paper in **290**, 261, 26-A1)

GELFREIKH, G. B. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedov, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)

GILLILAND, RONALD L. WZ Sagittae: Time-resolved Spectroscopy during Quiescence. *Ronald L. Gilliland, Edward Kemper, and Nicholas Suntzeff*. **301**, 252, 16-F4 (1986)

GIOIA, ISABELLA M. On the Relationship between Optically Selected and X-Ray–selected Active Galactic Nuclei. *Alberto Franceschini, Isabella M. Gioia, and Tommaso Maccacaro*. **301**, 124, 15-C9 (1986)

GIOVANELLI, RICCARDO. UGC 12591: The Most Rapidly Rotating Disk Galaxy. *Riccardo Giovanelli, Martha P. Haynes, Vera C. Rubin, and W. Kent Ford, Jr.* **301**, L7, 20-B4 (1986)

GIRAUD, EDMOND. The Distance Moduli from the *B*-Band Tully-Fisher Relation and the Velocity Field. *Edmond Giraud*. **301**, 7, 14-A14 (1986)

GLASSGOLD, A. E. *see* BREGMAN, JOE N., *et al.*

GLASSGOLD, A. E. Variablility of Lyman-Alpha and the Ultraviolet Continuum of 3C 446. *Joel N. Bregman, A. E. Glassgold, P. J. Huggins, and A. L. Kinney*. **301**, 698, 23-C3 (1986)

GÖRRES, J. A New Estimate of the ^{19}Ne(p, γ)^{20}Na and ^{15}O(α, γ)^{19}Ne Reaction Rates at Stellar Energies. *K. Langanke, M. Wiescher, W. A. Fowler, and J. Görres*. **301**, 629, 22-E3 (1986)

GOSS, W. M. Aperture Synthesis Observations of the 21 Centimeter Zeeman Effect toward Cassiopeia A. *U. J. Schwarz, T. H. Troland, J. S. Albinson, J. D. Bregman, W. M. Goss, and Carl Heiles*. **301**, 320, 17-D4 (1986)

GOTTARDI, M. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

GRASDALEN, GARY L. GSS 30: An Infrared Reflection Nebula in the Ophiuchus Dark Cloud: Erratum. *Michael W. Castelaz, John A. Hackwell, Gary L. Grasdalen, Robert D. Gehrz, and Craig Gullixson*. **301**, 502, 19-C9 (1986) (Orig. paper in **290**, 261, 26-A1)

GROTZ, K. Evidence for a Nonvanishing Energy Density of the Vacuum (or Cosmological Constant). *H. V. Klapdor and K. Grotz*. **301**, L39, 27-B1 (1986)

GUENTHER, D. B. The Stellar Seismology of ϵ Eridani. *D. B. Guenther and Pierre Demarque*. **301**, 207, 16-C1 (1986)

GULLIXSON, CRAIG. GSS 30: An Infrared Reflection Nebula in the Ophiuchus Dark Cloud: Erratum. *Michael W. Castelaz, John A. Hackwell, Gary L. Grasdalen, Robert D. Gehrz, and Craig Gullixson*. **301**, 502, 19-C9 (1986) (Orig. paper in **290**, 261, 26-A1)

HAAS, M. R. Detection of Si II (34.8 Micron) Emission in Orion-KL: A Measurement of the Silicon Abundance in Dense Interstellar Gas. *M. R. Haas, D. J. Hollenbach, and E. F. Erickson*. **301**, L57, 27-C7 (1986)

HACKWELL, J. A. *see* BREGMAN, JOEL N., *et al.*

HACKWELL, JOHN A. GSS 30: An Infrared Reflection Nebula in the Ophiuchus Dark Cloud: Erratum. *Michael W. Castelaz, John A. Hackwell, Gary L. Grasdalen, Robert D. Gehrz, and Craig Gullixson*. **301**, 502, 19-C9 (1986) (Orig. paper in **290**, 261, 26-A1)

HALPERN, J. P. Detection of [Ni II] λ7378 in Six Seyfert Galaxies. *J. P. Halpern and J. B. Oke*. **301**, 753, 23-G4 (1986)

HARA, T. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)

HARVEY, PAUL M. Infrared Studies of the Herbig-Haro Object 1–2 Region. *Paul M. Harvey, Marshall Joy, Daniel F. Lester, and Bruce A. Wilking*. **301**, 346, 17-F2 (1986)

Far-Infrared Photometry of Low-Mass Pre–Main-Sequence Stars with Broad CO Wings. *Neal J. Evans II, Russell M. Levreault, and Paul M. Harvey*. **301**, 894, 25-D7 (1986)

HATANO, Y. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)

HAUSER, M. G. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)

HAYASHIDA, N. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)

HAYNES, MARTHA P. UGC 12591: The Most Rapidly Rotating Disk Galaxy. *Riccardo Giovanelli, Martha P. Haynes, Vera C. Rubin, and W. Kent Ford, Jr.* **301**, L7, 20-B4 (1986)

HEILES, CARL. Aperture Synthesis Observations of the 21 Centimeter Zeeman Effect toward Cassiopeia A. *U. J. Schwarz, T. H. Troland, J. S. Albinson, J. D. Bregman, W. M. Goss, and Carl Heiles*. **301**, 320, 17-D4 (1986)

Zeeman Splitting of 18 Centimeter OH Lines toward Cassiopeia A and Other Sources. *Carl Heiles and Mary Stevens*. **301**, 331, 17-E1 (1986)

Interstellar Magnetic Field Strengths and Gas Densities: Observational and Theoretical Perspectives. *T. H. Troland and Carl Heiles*. **301**, 339, 17-E9 (1986)

HENRIKSEN, MARK J. The X-Ray Structure of the 3C 295 Cluster: A Cooling Flow at a Redshift of 0.5. *J. Patrick Henry and Mark J. Henriksen*. **301**, 689, 23-B8 (1986)

HENRY, J. PATRICK. The X-Ray Structure of the 3C 295 Cluster: A Cooling Flow at a Redshift of 0.5. *J. Patrick Henry and Mark J. Henriksen*. **301**, 689, 23-B8 (1986)

HENSON, G. D. Variable Polarization and Activity in Arcturus. *J. C. Kemp, G. D. Henson, D. J. Kraus, I. S. Beardsley, L. C. Carroll, and D. K. Duncan*. **301**, L35, 20-D7 (1986)

HERSHKOWITZ, STEPHEN. Spectral Flux from Low-Density Photospheres: Numerical Results. *Stephen Hershkowitz, Eric Linder, and Robert V. Wagoner*. **301**, 220, 16-C14 (1986)

HO, P. T. P. The Double Radio Source Associated with L1551 IRS 5: Binary System or Ionized Circumstellar Torus? *L. F. Rodriguez, J. Cantó, J. M. Torrelles, and P. T. P. Ho*. **301**, L25, 20-C10 (1986)

HOBBS, L. M. The Extent of the Local H I Halo. *Felix J. Lockman, L. M. Hobbs, and J. Michael Shull*. **301**, 380, 18-A8 (1986)

HODGE, P. E. *see* BREGMAN, JOEL N., *et al.*

HOFFMAN, YEHUDA. Hierarchical Clustering: Angular Momentum versus Density. *Yehuda Hoffman*. **301**, 65, 14-F4 (1986)

HOLLENBACH, D. J. Detection of Si II (34.8 Micron) Emission in Orion-KL: A Measurement of the Silicon Abundance in Dense Interstellar Gas. *M. R. Haas, D. J. Hollenbach, and E. F. Erickson*. **301**, L57, 27-C7 (1986)

HOLLIS, J. M. Evidence for Extended Radio Emission Surrounding RX Puppis. *J. M. Hollis, R. J. Oliversen, M. Kafatos, and A. G. Michalitsianos*. **301**, 877, 24-C4 (1986)

HONDA, M. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)

HUGGINS, P. J. *see* BREGMAN, JOEL N., *et al.*

HUGGINS, P. J. Variablility of Lyman-Alpha and the Ultraviolet Continuum of 3C 446. *Joel N. Bregman, A. E. Glassgold, P. J. Huggins, and A. L. Kinney*. **301**, 698, 23-C3 (1986)

HURLEY, K. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

HUTTER, D. J. Application of a Relativistic Jet Model to the Study of BL Lacertae Objects. *D. J. Hutter and S. L. Mufson*. **301**, 50, 14-E2 (1986)

IBEN, ICKO, JR. The Effects of Diffusion Due to Gravity and Due to Composition Gradients on the Rate of Hydrogen Burning in a Cooling Degenerate Dwarf. II. Dependence on Initial Metallicity and on Buffer Mass. *Icko Iben, Jr. and Jim MacDonald*. **301**, 164, 15-F7 (1986)

IKEUCHI, SATORU. Evolution of the Intergalactic Medium: What Happened during the Epoch z = 3–10? *Satoru Ikeuchi and Jeremiah P.*

Ostriker. **301**, 522, 21-D6 (1986)
ILLINGWORTH, GARTH. Discovery of Cepheids in M101. *Kem H. Cook, Marc Aaronson, and Garth Illingworth*. **301**, L45, 27-B6 (1986)
IMPEY, C. D. *see* BREGMAN, JOEL N., *et al.*

JENKINS, EDWARD B. Abundances of Interstellar Atoms from Ultraviolet Absorption Lines. *Edward B. Jenkins, Blair D. Savage, and Lyman Spitzer, Jr.* **301**, 355, 17-F11 (1986)
JENNER, DAVID C. Discovery of a New Short-Period, Eclipsing Cataclysmic Variable. *Ronald A. Downes, Mario Mateo, Paula Szkody, David C. Jenner, and Bruce Margon*. **301**, 240, 16-E9 (1986)
JOHNSON, H. R. Red Giant Model Atmospheres. IV. Colors of K and M Giant Models. *Thomas Y. Steiman-Cameron and H. R. Johnson*. **301**, 868, 25-B9 (1986)
JOY, MARSHALL. Infrared Studies of the Herbig-Haro Object 1–2 Region. *Paul M. Harvey, Marshall Joy, Daniel F. Lester, and Bruce A. Wilking*. **301**, 346, 17-F2 (1986)
JURA, M. Supernova Nucleosynthesis in Low-Metallicity Populations. *M. Jura*. **301**, 624, 22-D12 (1986)

KAFATOS, M. Evidence for Extended Radio Emission Surrounding RX Puppis. *J. M. Hollis, R. J. Oliversen, M. Kafatos, and A. G. Michalitsianos*. **301**, 877, 24-C4 (1986)
KAHN, S. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)
KAMATA, K. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
KELLETT, B. J. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)
KEMP, J. C. Variable Polarization and Activity in Arcturus. *J. C. Kemp, G. D. Henson, D. J. Kraus, I. S. Beardsley, L. C. Carroll, and D. K. Duncan*. **301**, L35, 20-D7 (1986)
KEMPER, EDWARD. WZ Sagittae: Time-resolved Spectroscopy during Quiescence. *Ronald L. Gilliland, Edward Kemper, and Nicholas Suntzeff*. **301**, 252, 16-F4 (1986)
KENNEY, JEFFREY D. CO in H I–deficient Virgo Cluster Spiral Galaxies. *Jeffrey D. Kenney and Judith S. Young*. **301**, L13, 20-B12 (1986)
KIFUNE, T. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
KINNEY, A. L. Variablility of Lyman-Alpha and the Ultraviolet Continuum of 3C 446. *Joel N. Bregman, A. E. Glassgold, P. J. Huggins, and A. L. Kinney*. **301**, 698, 23-C3 (1986)
KLAPDOR, H. V. Evidence for a Nonvanishing Energy Density of the Vacuum (or Cosmological Constant). *H. V. Klapdor and K. Grotz*. **301**, L39, 27-B1 (1986)
KLATT, C. Phase Modulation of the Sun's z Oscillations. *W. L. H. Shuter and C. Klatt*. **301**, 471, 19-A6 (1986)
KLEBESADEL, R. W. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
KORZHAVIN, A. N. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)
KRAUS, D. J. Variable Polarization and Activity in Arcturus. *J. C. Kemp, G. D. Henson, D. J. Kraus, I. S. Beardsley, L. C. Carroll, and D. K. Duncan*. **301**, L35, 20-D7 (1986)
KU, W. H.-M. *see* BREGMAN, JOEL N., *et al.*
KUIJPERS, J. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)
KURT, V. G. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
KUZNETSOV, A. V. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)

LADA, ELIZABETH A. High-Latitude Molecular Clouds: Completeness of the Local Sample and Implications for Molecular Surveys. *Loris Magnani, Elizabeth A. Lada, and Leo Blitz*. **301**, 395, 18-B9 (1986)
LANG, KENNETH R. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)
LANGANKE, K. A New Estimate of the ^{19}Ne(p, γ)^{20}Na and ^{15}O(α, γ)^{19}Ne Reaction Rates at Stellar Energies. *K. Langanke, M. Wiescher, W. A. Fowler, and J. Görres*. **301**, 629, 22-E3 (1986)
LAROS, J. G. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
LAVIOLETTE, PAUL A. Is the Universe Really Expanding? *Paul A. LaViolette*. **301**, 544, 21-E14 (1986)
LEACOCK, R. J. *see* BREGMAN, JOEL N., *et al.*
LEBOFSKY, M. J. *see* BREGMAN, JOEL N., *et al.*
LEBOFSKY, M. J. Observations of Upper-Level Hydrogen Lines in Seyfert 1 Galaxies. *Christopher W. McAlary, G. H. Rieke, M. J. Lebofsky, and John T. Stocke*. **301**, 105, 15-B4 (1986)
LEBOFSKY, MARCIA J. The Inclination Dependence of Far-Infrared Emission from Sc Galaxies. *David Burstein and Marcia J. Lebofsky*. **301**, 683, 23-B2 (1986)
LEE, MARTIN A. On the Behavior of Hydromagnetic Surface Waves. *Martin A. Lee and B. Roberts*. **301**, 430, 18-E5 (1986)
LESTER, D. F. *see* BREGMAN, JOEL N., *et al.*
LESTER, DANIEL F. Infrared Studies of the Herbig-Haro Object 1–2 Region. *Paul M. Harvey, Marshall Joy, Daniel F. Lester, and Bruce A. Wilking*. **301**, 346, 17-F2 (1986)
LEVREAULT, RUSSELL M. Far-Infrared Photometry of Low-Mass Pre–Main-Sequence Stars with Broad CO Wings. *Neal J. Evans II, Russell M. Levreault, and Paul M. Harvey*. **301**, 894, 25-D7 (1986)
LIEBERT, JAMES. Circular Polarization in the DQ Herculis Binary 3A 0729 + 103. *William R. Penning, Gary D. Schmidt, and James Liebert*. **301**, 881, 24-C8 (1986)
LIKKEL, LAUREN. Observations of the Bowen Fluorescent Mechanism in Planetary Nebulae. *Lauren Likkel and L. H. Aller*. **301**, 825, 24-F2 (1986)
LINDER, ERIC. Spectral Flux from Low-Density Photospheres: Numerical Results. *Stephen Hershkowitz, Eric Linder, and Robert V. Wagoner*. **301**, 220, 16-C14 (1986)
LITES, BRUCE W. Photoelectic Observations of Chromospheric Sunspot Oscillations. III. Spatial Distribution of Power and Frequency in Umbrae. *Bruce W. Lites*. **301**, 992, 26-E9 (1986)
Photoelectric Observations of Chromospheric Sunspot Oscillations. IV. The Ca II H Lines and He I λ10830. *Bruce W. Lites*. **301**, 1005, 26-F9 (1986)
LOCKMAN, FELIX J. The Extent of the Local H I Halo. *Felix J. Lockman, L. M. Hobbs, and J. Michael Shull*. **301**, 380, 18-A8 (1986)
LOUGHHEAD, R. E. High-Resolution Photography of the Soslar Chromosphere. XXIII. Direct Measuruement of the Optical Thickness of Hα Solar Loops. *R. J. Bray and R. E. Loughhead*. **301**, 989, 26-E4 (1986)

MACCACARO, TOMMASO. On the Relationship between Optically Selected and X-Ray–selected Active Galactic Nuclei. *Alberto Franceschini, Isabella M. Gioia, and Tommaso Maccacaro*. **301**, 124, 15-C9 (1986)
MACDONALD, JIM. The Effects of Diffusion Due to Gravity and Due to Composition Gradients on the Rate of Hydrogen Burning in a Cooling Degenerate Dwarf. II. Dependence on Initial Metallicity and on Buffer Mass. *Icko Iben, Jr. and Jim MacDonald*. **301**, 164, 15-F7 (1986)
MAGNANI, LORIS. High-Latitude Molecular Clouds: Completeness of the Local Sample and Implications for Molecular Surveys. *Loris Magnani, Elizabeth A. Lada, and Leo Blitz*. **301**, 395, 18-B9 (1986)
MARGON, BRUCE. Discovery of a New Short-Period, Eclipsing Cataclysmic Variable. *Ronald A. Downes, Mario Mateo, Paula Szkody, David C. Jenner, and Bruce Margon*. **301**, 240, 16-E9 (1986)
MARTIN, BRIAN. A Test of the Dipole Model for the Rotating Magnetic White Dwarf Feige 7. *Brian Martin and D. T. Wickramasinghe*. **301**, 177, 15-G9 (1986)
MASON, H. E. Electron Density Diagnostics in the 10–100 Å Interval for a Solar Flare. *W. A. Brown, M. E. Bruner, L. W. Acton, and H. E. Mason*. **301**, 981, 26-D10 (1986)

MATEO, MARIO. Discovery of a New Short-Period, Eclipsing Cataclysmic Variable. *Ronald A. Downes, Mario Mateo, Paula Szkody, David C. Jenner, and Bruce Margon*. **301**, 240, 16-E9 (1986)
Z Camelopardalis: Outburst P Cygni Profiles and Quiescent Continuum. *Paula Szkody and Mario Mateo*. **301**, 286, 17-A10 (1986)
MATHEWSON, D. S. The Structure of the Small Magellanic Cloud. *D. S. Mathewson, V. L. Ford, and N. Visvanathan*. **301**, 664, 22-G11 (1986)
MATHIS, JOHN S. The Photoionization of the Diffuse Galactic Gas. *John S. Mathis*. **301**, 423, 18-D12 (1986)
MATSUBARA, Y. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
MATTHEWS, K. *see* BREGMAN, JOEL N., *et al.*
MATZ, S. M. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)
MCALARY, CHRISTOPHER W. Observations of Upper-Level Hydrogen Lines in Seyfert 1 Galaxies. *Christopher W. McAlary, G. H. Rieke, M. J. Lebofsky, and John T. Stocke*. **301**, 105, 15-B4 (1986)
MCDONALD, F. B. The Composition of Solar Energetic Particles. *R. E. McGuire, T. T. von Rosenvinge, and F. B. McDonald*. **301**, 938, 26-A3 (1986)
MCGUIRE, R. E. Two Classes of Solar Energetic Particle Events Associated with Impulsive and Long-Duration Soft X-Ray Flares. *H. V. Cane, R. E. McGuire, and T. T. von Rosenvinge*. **301**, 448, 18-F9 (1986)
The Composition of Solar Energetic Particles. *R. E. McGuire, T. T. von Rosenvinge, and F. B. McDonald*. **301**, 938, 26-A3 (1986)
MESSINA, D. C. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)
MICHALITSIANOS, A. G. Evidence for Extended Radio Emission Surrounding RX Puppis. *J. M. Hollis, R. J. Oliversen, M. Kafatos, and A. G. Michalitsianos*. **301**, 877, 24-C4 (1986)
MORGAN, BRIAN L. Magnesium Gradients in Elliptical Galaxies. I. Method and Initial Results. *William A. Baum, Bjarne Thomsen, and Brian L. Morgan*. **301**, 83, 14-G10 (1986)
MORI, M. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
MUFSON, S. L. Application of a Relativistic Jet Model to the Study of BL Lacertae Objects. *D. J. Hutter and S. L. Mufson*. **301**, 50, 14-E2 (1986)
MULLAN, D. J. Models of Transition Regions in Hybrid Stars. *J. W. Brosius and D. J. Mullan*. **301**, 650, 22-F11 (1986)
MUTEL, ROBERT L. Interstellar Scattering of Compact Radio Sources near Supernova Remnants. *Steven R. Spangler, Robert L. Mutel, John M. Benson, and James M. Cordes*. **301**, 312, 17-C8 (1986)
MUZZIO, JUAN C. Massive Central Galaxies, Globular Cluster Swapping, and Tidal Accretion. *Juan C. Muzzio*. **301**, 23, 14-C2 (1986)
MYERS, P. C. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)

NAGANO, M. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
NARAYAN, RAMESH. Flicker of Extragalactic Radio Sources and Refractive Interstellar Scintillation. *Roger Blandford, Ramesh Narayan, and Roger W. Romani*. **301**, L53, 27-C3 (1986)
NAUTIYAL, C. M. Solar Flare Neon Composition and Solar Cosmic-Ray Exposure Ages Based on Lunar Mineral Separates. *C. M. Nautiyal, J. T. Padia, M. N. Rao, and T. R. Vankatesan*. **301**, 465, 18-G14 (1986)
NEUGEBAUER, G. *see* BREGMAN, JOEL N., *et al.*
NIEL, M. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
NISHIJIMA, K. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
NOCI, G. The Structure of the Static Corona and Transition Region. *S. K. Antiochos and G. Noci*. **301**, 440, 18-F1 (1986)
NORMAN, COLIN A. Bipolar Hydromagnetic Winds from Disks around Protostellar Objects. *Ralph E. Pudritz and Colin A. Norman*. **301**, 571, 22-A1 (1986)
NORRIS, J. P. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)

O'DEA, CHRISTOPHER P. Multifrequency VLA Observations of the Prototypical Narrow-Angle Tail Radio Source, NGC 1265. *Christopher P. O'Dea and Frazer N. Owen*. **301**, 841, 24-G4 (1986)
ODEGARD, NILS. Decameter Wavelength Observations of the Rosette Nebula and the Monoceros Loop Supernova Remnant. *Nils Odegard*. **301**, 813, 24-E4 (1986)
OKE, J. B. Detection of [Ni II] λ7378 in Six Seyfert Galaxies. *J. P. Halpern and J. B. Oke*. **301**, 753, 23-G4 (1986)
OLIVERSEN, R. J. Evidence for Extended Radio Emission Surrounding RX Puppis. *J. M. Hollis, R. J. Oliversen, M. Kafatos, and A. G. Michalitsianos*. **301**, 877, 24-C4 (1986)
OSTERBROCK, D. E. NGC 1320: A Feeble, High-Ionization Seyfert 2 Galaxy. *M. M. De Robertis and D. E. Osterbrock*. **301**, 98, 15-A11 (1986)
An Analysis of the Narrow Line Profiles in Syefert 2 Galaxies. *M. M. De Robertis and D. E. Osterbrock*. **301**, 727, 23-E4 (1986)
OSTRIKER, JEREMIAH P. Evolution of the Intergalactic Medium: What Happened during the Epoch $z = 3$–10? *Satoru Ikeuchi and Jeremiah P. Ostriker*. **301**, 522, 21-D6 (1986)
OWEN, FRAZER N. Multifrequency VLA Observations of the Prototypical Narrow-Angle Tail Radio Source, NGC 1265. *Christopher P. O'Dea and Frazer N. Owen*. **301**, 841, 24-G4 (1986)

PACZYŃSKI, BOHDAN. Gravitational Microlensing at Large Optical Depth. *Bohdan Paczyński*. **301**, 503, 21-C1 (1986)
PADIA, J. T. Solar Flare Neon Composition and Solar Cosmic-Ray Exposure Ages Based on Lunar Mineral Separates. *C. M. Nautiyal, J. T. Padia, M. N. Rao, and T. R. Vankatesan*. **301**, 465, 18-G14 (1986)
PANAGIA, N. Radio Supernovae. *K. W. Weiler, R. A. Sramek, N. Panagia, J. M. van der Hulst, and M. Salvati*. **301**, 790, 24-C5 (1986)
PARMAR, A. N. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)
PENNING, WILLIAM R. Circular Polarization in the DQ Herculis Binary 3A 0729 + 103. *William R. Penning, Gary D. Schmidt, and James Liebert*. **301**, 881, 24-C8 (1986)
PESNELL, W. DEAN. Brunt-Väisälä Frequency and Semiconvection. *W. Dean Pesnell*. **301**, 204, 16-B12 (1986)
PETERS, GERALDINE J. Observation of the Onset of an Emission Episode in the Be Star Mu Centauri. *Geraldine J. Peters*. **301**, L61, 27-C11 (1986)
PETROV, Z. E. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedov, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)
PICA, A. J. *see* BREGMAN, JOEL N., *et al.*
PILACHOWSKI, CATHERINE A. Carbon Isotope Ratios in Giant Stars of the Old Galactic Cluster NGC 7789. *Christopher Sneden and Catherine A. Pilachowski*. **301**, 860, 25-B1 (1986)
PINEAULT, SERGE. The Radio Luminosity and Magnetic Field of Pulsars. *Serge Pineault*. **301**, 145, 15-E2 (1986)
PIPHER, J. L. Sagittarius A^{STAR} and the Positions of Infrared Sources in the Galactic Center. *W. J. Forrest, J. L. Pipher, and W. A. Stein*. **301**, L49, 27-B11 (1986)
PIZZICHINI, G. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
POLIDAN, R. S. Dwarf Nova Burst Asymmetry and the Physics of Accretion Disks. *J. K. Cannizzo, J. C. Wheeler, and R. S. Polidan*. **301**, 634, 22-E8 (1986)
POLLOCK, J. T. *see* BREGMAN, JOEL N., *et al.*
PRIEDHORSKY, W. Long-Term Observations of Cygnus X-3 with *Vela 5B*. *W. Priedhorsky and J. Terrell*. **301**, 886, 25-C13 (1986)
PRIMACK, JOEL R. Contraction of Dark Matter Galactic Halos Due to Baryonic Infall. *George R. Blumenthal, S. M. Faber, Ricardo Flores, and Joel R. Primack*. **301**, 27, 14-C6 (1986)
PUDRITZ, RALPH E. Bipolar Hydromagnetic Winds from Disks around Protostellar Objects. *Ralph E. Pudritz and Colin A. Norman*. **301**, 571, 22-A1 (1986)

RAMATY, REUVEN. Directionality of Bremsstrahlung from Relativistic Electrons in Solar Flares. *Charles D. Dermer and Reuven Ramaty*. **301**, 962, 26-C5 (1986)
RANKIN, JOANNA M. Toward an Empirical Theory of Pulsar Emission. III. Mode Changing, Drifting Subpulses, and Pulse Nulling. *Joanna M. Rankin*. **301**, 901, 25-E1 (1986)
RAO, M. N. Solar Flare Neon Composition and Solar Cosmic-Ray Exposure Ages Based on Lunar Mineral Separates. *C. M. Nautiyal, J. T. Padia, M. N. Rao, and T. R. Vankatesan*. **301**, 465, 18-G14 (1986)
REMILLARD, R. A. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)
RIEKE, G. H. *see* BREGMAN, JOEL N., *et al.*
RIEKE, G. H. Observations of Upper-Level Hydrogen Lines in Seyfert 1 Galaxies. *Christopher W. McAlary, G. H. Rieke, M. J. Lebofsky, and John T. Stocke*. **301**, 105, 15-B4 (1986)
RIVOLO, A. R. The Two-Point Galaxy Correlation Function of the Local Supercluster. *A. R. Rivolo*. **301**, 70, 14-F9 (1986)
The Massachusetts–Stony Brook Galactic Plane CO Survey: Statistical Clustering Properties of Molecular Cloud Cores. *A. R. Rivolo, P. M. Solomon, and D. B. Sanders*. **301**, L19, 20-C5 (1986)
ROBERTS, B. On the Behavior of Hydromagnetic Surface Waves. *Martin A. Lee and B. Roberts*. **301**, 430, 18-E5 (1986)
ROBERTS, W. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)
RODRÍGUEZ, L. F. The Double Radio Source Associated with L1551 IRS 5: Binary System or Ionized Circumstellar Torus? *L. F. Rodriguez, J. Cantô, J. M. Torrelles, and P. T. P. Ho*. **301**, L25, 20-C10 (1986)
ROELLIG, T. P. L. *see* BREGMAN, JOEL N., *et al.*
ROMANI, ROGER W. Flicker of Extragalactic Radio Sources and Refractive Interstellar Scintillation. *Roger Blandford, Ramesh Narayan, and Roger W. Romani*. **301**, L53, 27-C3 (1986)
ROMANISHIN, W. Optical and Infrared Studies of Galaxy Clusters with Cooling Accretion Flows. *W. Romanishin*. **301**, 675, 23-A8 (1986)
ROSNER, R. On Magnetic Field Stochasticity and Nonthermal Line Broadening in Solar Flares. *E. Antonucci, R. Rosner, and K. Tsinganos*. **301**, 975, 26-D4 (1986)
ROWAN-ROBINSON, M. The Dipole Anisoptropies of the *IRAS* Galaxies and the Microwave Background Radiation. *A. Yahil, D. Walker, and M. Rowan-Robinson*. **301**, L1, 20-A4 (1986)
RUBIN, VERA C. UGC 12591: The Most Rapidly Rotating Disk Galaxy. *Riccardo Giovanelli, Martha P. Haynes, Vera C. Rubin, and W. Kent Ford, Jr.* **301**, L7, 20-B4 (1986)

SAIO, HIDEYUKI. Initial Mass Function for Zero-Metal Stars. *Yuzuru Yoshii and Hideyuki Saio*. **301**, 587, 22-B3 (1986)
SALVATI, M. Radio Supernovae. *K. W. Weiler, R. A. Sramek, N. Panagia, J. M. van der Hulst, and M. Salvati*. **301**, 790, 24-C5 (1986)
SANDERS, D. B. The Massachusetts–Stony Brook Galactic Plane CO Survey: Statistical Clustering Properties of Molecular Cloud Cores. *A. R. Rivolo, P. M. Solomon, and D. B. Sanders*. **301**, L19, 20-C5 (1986)
SASLAW, WILLIAM C. How Relaxed Is the Distribution of Galaxies? *Philippe Crane and William C. Saslaw*. **301**, 1, 14-A8 (1986)
SAULSON, PETER R. The Smoothness of the 2.2 Micron Background: Constraints on Models of Primeval Galaxies. *Stephen P. Boughn, Peter R. Saulson, and Juan M. Uson*. **301**, 17, 14-B10 (1986)
SAVAGE, BLAIR D. Abundances of Interstellar Atoms from Ultraviolet Absorption Lines. *Edward B. Jenkins, Blair D. Savage, and Lyman Spitzer, Jr.* **301**, 355, 17-F11 (1986)
SCALO, JOHN M. A Physical Mechanism for Bursts of Star Formation. *John M. Scalo and Curtis Struck-Marcell*. **301**, 77, 14-G2 (1986)
SCHATTENBURG, MARK L. High-Resolution X-Ray Spectroscopy of the Crab Nebula and the Oxygen Abundance of the Interstellar Medium. *Mark L. Schattenburg and Claude R. Canizares*. **301**, 759, 23-G11 (1986)
SCHILIZZI, RICHARD. VLBI and VLA Observations of the BL Lacertae–Type Object Markarian 501: Evidence for Grossly Misalingned Small-Scale and Large-Scale Radio Structure. *Wil van Bruegel and Richard Schilizzi*. **301**, 834, 24-F11 (1986)
SCHMIDT, GARY D. Circular Polarization in the DQ Herculis Binary 3A 0729 + 103. *William R. Penning, Gary D. Schmidt, and James Liebert*. **301**, 881, 24-C8 (1986)
SCHOMBERT, JAMES M. The Structure of Brightest Cluster Members. I. Surface Photometry (Abstract of Paper in 1986 March Suppl.). *James M. Schombert*. **301**, 1019, 26-G9 (1986)
SCHWARTZ, D. A. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)
SCHWARZ, U. J. Aperture Synthesis Observations of the 21 Centimeter Zeeman Effect toward Cassiopeia A. *U. J. Schwarz, T. H. Troland, J. S. Albinson, J. D. Bregman, W. M. Goss, and Carl Heiles*. **301**, 320, 17-D4 (1986)
SEAQUIST, E. R. A Theoretical Interpretation of the Σ-*D* Relation for Supernova Remnants. *Nebojsa Duric and E. R. Seaquist*. **301**, 308, 17-C4 (1986)
SHARE, G. H. Spectral Evolution of Pulse Structures in Gamma-Ray Bursts. *J. P. Norris, G. H. Share, D. C. Messina, B. R. Dennis, U. D. Desai, T. L. Cline, S. M. Matz, and E. L. Chpp*. **301**, 213, 16-C7 (1986)
SHIA, RUN-LIE. Radiative Transfer in a Sphere Illuminated by a Parallel Beam: An Integral Equation Approach. *Run-Lie Shia and Yuk L. Yung*. **301**, 554, 21-F10 (1986)
SHULL, J. MICHAEL. The Extent of the Local H I Halo. *Felix J. Lockman, L. M. Hobbs, and J. Michael Shull*. **301**, 380, 18-A8 (1986)
SHUTER, W. L. H. Phase Modulation of the Sun's *z* Oscillations. *W. L. H. Shuter and C. Klatt*. **301**, 471, 19-A6 (1986)
SILVERBERG, R. F. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)
SMITH, A. G. *see* BREGMAN, JOEL N., *et al.*
SNEDEN, CHRISTOPHER. Carbon Isotope Ratios in Giant Stars of the Old Galactic Cluster NGC 7789. *Christopher Sneden and Catherine A. Pilachowski*. **301**, 860, 25-B1 (1986)
SOIFER, B. T. *see* BREGMAN, JOEL N., *et al.*
SOLOMON, P. M. The Massachusetts–Stony Brook Galactic Plane CO Survey: Statistical Clustering Properties of Molecular Cloud Cores. *A. R. Rivolo, P. M. Solomon, and D. B. Sanders*. **301**, L19, 20-C5 (1986)
SPANGLER, STEVEN R. Interstellar Scattering of Compact Radio Sources near Supernova Remnants. *Steven R. Spangler, Robert L. Mutel, John M. Benson, and James M. Cordes*. **301**, 312, 17-C8 (1986)
SPITZER, LYMAN, JR. Abundances of Interstellar Atoms from Ultraviolet Absorption Lines. *Edward B. Jenkins, Blair D. Savage, and Lyman Spitzer, Jr.* **301**, 355, 17-F11 (1986)
SRAMEK, R. A. Radio Supernovae. *K. W. Weiler, R. A. Sramek, N. Panagia, J. M. van der Hulst, and M. Salvati*. **301**, 790, 24-C5 (1986)
STEIMAN-CAMERON, THOMAS Y. Red Giant Model Atmospheres. IV. Colors of K and M Giant Models. *Thomas Y. Steiman-Cameron and H. R. Johnson*. **301**, 868, 25-B9 (1986)
STEIN, W. A. Sagittarius A^{STAR} and the Positions of Infrared Sources in the Galactic Center. *W. J. Forrest, J. L. Pipher, and W. A. Stein*. **301**, L49, 27-B11 (1986)
STEPHENSON, C. B. Late M Stars Found in a Hemispheric Survey. *C. B. Stephenson*. **301**, 927, 25-F13 (1986)
STERNBERG, AMIEL. The Infrared Response to Electron-Position Pair Annihilation at the Galactic Center. *Amiel Sternberg*. **301**, 923, 25-F9 (1986)
STEVENS, MARY. Zeeman Splitting of 18 Centimeter OH Lines toward Cassiopeia A and Other Sources. *Carl Heiles and Mary Stevens*. **301**, 331, 17-E1 (1986)
STOCKE, JOHN T. Observations of Upper-Level Hydrogen Lines in Seyfert 1 Galaxies. *Christopher W. McAlary, G. H. Rieke, M. J. Lebofsky, and John T. Stocke*. **301**, 105, 15-B4 (1986)
STRUCK-MARCELL, CURTIS. A Physical Mechanism for Bursts of Star Formation. *John M. Scalo and Curtis Struck-Marcell*. **301**, 77, 14-G2 (1986)
SUNTZEFF, NICHOLAS. WZ Sagittae: Time-resolved Spectroscopy during Quiescence. *Ronald L. Gilliland, Edward Kemper, and Nicholas Suntzeff*. **301**, 252, 16-F4 (1986)
SZKODY, PAULA. Discovery of a New Short-Period, Eclipsing Cataclysmic Variable. *Ronald A. Downes, Mario Mateo, Paula Szkody, David C. Jenner, and Bruce Margon*. **301**, 240, 16-E9 (1986)
Z Camelopardalis: Outburst P Cygni Profiles and Quiescent Continuum. *Paula Szkody and Mario Mateo*. **301**, 286, 17-A10 (1986)
EXOSAT Results on V426 Ophiuchi: Indications of a DQ Herculis System. *Paula Szkody*. **301**, L29, 20-C14 (1986)

TAAM, RONALD E. Models for Type I Supernova. I. Detonations in White Dwarfs. *S. E. Woosley, Ronald E. Taam, and Thomas A. Weaver*. **301**, 601, 22-C3 (1986)
TAGLIAFERRI, GIANPIERO. On the X-Ray and Ultraviolet Spectrum of the High-Redshift Quasar 3C 446. *Bianca Garilli and Gianpiero Tagliaferri*. **301**, 703, 23-C8 (1986)
TANAHASHI, G. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and*

M. Teshima. **301**, 230, 16-D10 (1986)
TERRELL, J. Long-Term Observations of Cygnus X-3 with *Vela 5B*. *W. Priedhorsky and J. Terrell*. **301**, 886, 25-C13 (1986)
TESHIMA, M. Detection of 10^{15} eV Gamma Rays from Cygnus X-3. *T. Kifune, K. Nishijima, T. Hara, Y. Hatano, N. Hayashida, M. Honda, K. Kamata, Y. Matsubara, M. Mori, M. Nagano, G. Tanahashi, and M. Teshima*. **301**, 230, 16-D10 (1986)
THADDEUS, P. Molecular Clouds and Star Formation in the Inner Galaxy: A Comparison of CO, H II, and Far-Infrared Surveys. *P. C. Myers, T. M. Dame, P. Thaddeus, R. S. Cohen, R. F. Silverberg, E. Dwek, and M. G. Hauser*. **301**, 398, 18-B12 (1986)
The Columbia CO Survey of Molecular Clouds in the First Galactic Quadrant (Abstract of Paper in 1986 March Suppl.). *R. S. Cohen, T. M. Dame, and P. Thaddeus*. **301**, 1019, 26-G9 (1986)
THOMSEN, BJARNE. Magnesium Gradients in Elliptical Galaxies. I. Method and Initial Results. *William A. Baum, Bjarne Thomsen, and Brian L. Morgan*. **301**, 83, 14-G10 (1986)
TORRELLES, J. M. The Double Radio Source Associated with L1551 IRS 5: Binary System or Ionized Circumstellar Torus? *L. F. Rodriguez, J. Cantó, J. M. Torrelles, and P. T. P. Ho*. **301**, L25, 20-C10 (1986)
TREMAINE, SCOTT. Can Comet Clouds around Neutron Stars Explain Gamma-Ray Bursts? *Scott Tremaine and Anna N. Zytkow*. **301**, 155, 15-E12 (1986)
TROLAND, T. H. Aperture Synthesis Observations of the 21 Centimeter Zeeman Effect toward Cassiopeia A. *U. J. Schwarz, T. H. Troland, J. S. Albinson, J. D. Bregman, W. M. Goss, and Carl Heiles*. **301**, 320, 17-D4 (1986)
Interstellar Magnetic Field Strengths and Gas Densities: Observational and Theoretical Perspectives. *T. H. Troland and Carl Heiles*. **301**, 339, 17-E9 (1986)
TSINGANOS, K. On Magnetic Field Stochasticity and Nonthermal Line Broadening in Solar Flares. *E. Antonucci, R. Rosner, and K. Tsinganos*. **301**, 975, 26-D4 (1986)
TUOHY, I. R. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)

USON, JUAN M. The Smoothness of the 2.2 Micron Background: Constraints on Models of Primeval Galaxies. *Stephen P. Boughn, Peter R. Saulson, and Juan M. Uson*. **301**, 17, 14-B10 (1986)

VAN BRUEGEL, WIL. VLBI and VLA Observations of the BL Lacertae–Type Object Markarian 501: Evidence for Grossly Misalingned Small-Scale and Large-Scale Radio Structure. *Wil van Bruegel and Richard Schilizzi*. **301**, 834, 24-F11 (1986)
VAN DEN OORD, G. H. J. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)
VAN DER HULST, J. M. Radio Supernovae. *K. W. Weiler, R. A. Sramek, N. Panagia, J. M. van der Hulst, and M. Salvati*. **301**, 790, 24-C5 (1986)
VANKATESAN, T. R. Solar Flare Neon Composition and Solar Cosmic-Ray Exposure Ages Based on Lunar Mineral Separates. *C. M. Nautiyal, J. T. Padia, M. N. Rao, and T. R. Vankatesan*. **301**, 465, 18-G14 (1986)
VEDRENNE, G. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
VISVANATHAN, N. The Structure of the Small Magellanic Cloud. *D. S. Mathewson, V. L. Ford, and N. Visvanathan*. **301**, 664, 22-G11 (1986)
VON ROSENVINGE, T. T. Two Classes of Solar Energetic Particle Events Associated with Impulsive and Long-Duration Soft X-Ray Flares. *H. V. Cane, R. E. McGuire, and T. T. von Rosenvinge*. **301**, 448, 18-F9 (1986)
The Composition of Solar Energetic Particles. *R. E. McGuire, T. T. von Rosenvinge, and F. B. McDonald*. **301**, 938, 26-A3 (1986)

WAGH, S. M. Revival of the Penrose Process for Astrophysical Applications: erratum. *S. M Wagh, S. V. Dhurandhar, and N. Dadhich*. **301**, 1018, 26-G8 (1986) (Orig. paper in **290**, 12, 23-B3)
WAGONER, ROBERT V. Spectral Flux from Low-Density Photospheres: Numerical Results. *Stephen Hershkowitz, Eric Linder, and Robert V. Wagoner*. **301**, 220, 16-C14 (1986)
WALKER, D. The Dipole Anisoptropies of the *IRAS* Galaxies and the Microwave Background Radiation. *A. Yahil, D. Walker, and M. Rowan-Robinson*. **301**, L1, 20-A4 (1986)
WEAVER, THOMAS A. Models for Type I Supernova. I. Detonations in White Dwarfs. *S. E. Woosley, Ronald E. Taam, and Thomas A. Weaver*. **301**, 601, 22-C3 (1986)
WEBB, J. *see* BREGMAN, JOEL N., *et al*.
WEILER, K. W. Radio Supernovae. *K. W. Weiler, R. A. Sramek, N. Panagia, J. M. van der Hulst, and M. Salvati*. **301**, 790, 24-C5 (1986)
WEYMANN, RAY J. On the Abundance of Metals and the Ionization State in Absorbing Clouds toward QSOs. *Frederic H. Chaffee, Jr., Craig B. Foltz, Jill Bechtold, and Ray J. Weymann*. **301**, 116, 15-C1 (1986)
WHEELER, J. C. Dwarf Nova Burst Asymmetry and the Physics of Accretion Disks. *J. K. Cannizzo, J. C. Wheeler, and R. S. Polidan*. **301**, 634, 22-E8 (1986)
WHITE, N. E. An *EXOSAT* Observation of Quiescent and Flare Coronal X-Ray Emission from Algol. *N. E. White, J. L. Culhane, A. N. Parmar, B. J. Kellett, S. Kahn, G. H. J. van den Oord, and J. Kuijpers*. **301**, 262, 16-F14 (1986)
WICKRAMASINGHE, D. T. A Test of the Dipole Model for the Rotating Magnetic White Dwarf Feige 7. *Brian Martin and D. T. Wickramasinghe*. **301**, 177, 15-G9 (1986)
WIESCHER, M. A New Estimate of the ^{19}Ne(p, γ)^{20}Na and ^{15}O(α, γ)^{19}Ne Reaction Rates at Stellar Energies. *K. Langanke, M. Wiescher, W. A. Fowler, and J. Görres*. **301**, 629, 22-E3 (1986)
WILKING, BRUCE A. Infrared Studies of the Herbig-Haro Object 1–2 Region. *Paul M. Harvey, Marshall Joy, Daniel F. Lester, and Bruce A. Wilking*. **301**, 346, 17-F2 (1986)
WILLS, B. J. *see* BREGMAN, JOEL N., *et al*.
WILLS, D. *see* BREGMAN, JOEL N., *et al*.
WILLSON, ROBERT F. Structure of a Solar Active Region from RATAN 600 and Very Large Array Observations. *Sh. B. Akhmedow, V. N. Borovik, G. B. Gelfreikh, V. M. Bogod, A. N. Korzhavin, Z. E. Petrov, V. N. Dikij, Kenneth R. Lang, and Robert F. Willson*. **301**, 460, 18-G9 (1986)
WIŚNIEWSKI, W. Z. *see* BREGMAN, JOEL N., *et al*.
WITTEBORN, F. C. *see* BREGMAN, JOEL N., *et al*.
WOOD, K. The Discovery of Eight Bright Active Galactic Nuclei Observed with the *HEAO 1* Scanning Modulation Collimator. *R. A. Remillard, H. V. Brandt, D. A. H. Buckley, W. Roberts, D. A. Schwartz, I. R. Tuohy, and K. Wood*. **301**, 742, 23-F5 (1986)
WOOLF, N. J. 15 Meter Multiple Mirror Telescope Design Study. *J. R. P. Angel and N. J. Woolf*. **301**, 478, 19-A13 (1986)
WOOSLEY, S. E. Models for Type I Supernova. I. Detonations in White Dwarfs. *S. E. Woosley, Ronald E. Taam, and Thomas A. Weaver*. **301**, 601, 22-C3 (1986)

YAHIL, A. The Dipole Anisoptropies of the *IRAS* Galaxies and the Microwave Background Radiation. *A. Yahil, D. Walker, and M. Rowan-Robinson*. **301**, L1, 20-A4 (1986)
YOSHII, YUZURU. Initial Mass Function for Zero-Metal Stars. *Yuzuru Yoshii and Hideyuki Saio*. **301**, 587, 22-B3 (1986)
YOUNG, JUDITH S. CO in H I–deficient Virgo Cluster Spiral Galaxies. *Jeffrey D. Kenney and Judith S. Young*. **301**, L13, 20-B12 (1986)
YUNG, YUK L. Radiative Transfer in a Sphere Illuminated by a Parallel Beam: An Integral Equation Approach. *Run-Lie Shia and Yuk L. Yung*. **301**, 554, 21-F10 (1986)

ZENCHENKO, V. M. Constraints on Neutron Star Models of Gamma-Burst Sources from the *Einstein Observatory*. *G. Pizzichini, M. Gottardi, J.-L. Atteia, C. Barat, K. Hurley, M. Niel, G. Vedrenne, J. G. Laros, W. D. Evans, E. E. Fenimore, R. W. Klebesadel, T. L. Cline, U. D. Desai, V. G. Kurt, A. V. Kuznetsov, and V. M. Zenchenko*. **301**, 641, 22-F1 (1986)
ZUCKERMAN, B. Origin of Planetary Nebulae: Morphology, Carbon-to-Oxygen Abundance Ratios, and Central Star Multiplicity. *B. Zuckerman and Lawrence H. Aller*. **301**, 772, 24-A10 (1986)
ZYTKOW, ANNA N. Can Comet Clouds around Neutron Stars Explain Gamma-Ray Bursts? *Scott Tremaine and Anna N. Zytkow*. **301**, 155, 15-E12 (1986)